

CLAIMS

What is claimed is:

1. A method for automated testing of display signals from video graphics circuitry comprising:
 - capturing at least one display signal;
 - converting the display signal into at least one data acquisition signal; and
 - providing the at least one data acquisition signal to a test system that tests the display signal.
2. The method of claim 1 further comprising:
 - taking measurements of the at least one data acquisition signal.
3. The method of claim 2 wherein the data acquisition signals include at least one of the following: a vertical synchronization signal, a horizontal synchronization signal, a data enable signal, a pixel clock signal and a voltage control signal.
4. The method of claim 1 wherein the display signals are also transmitted to the display device.
5. The method of claim 4 wherein the display signals are transmitted to the display device using low voltage differential signaling.
6. The method of claim 4 wherein the display signals are transmitted to the display device using transition minimized differential signaling.
7. The method of claim 4 wherein the display signals are transmitted to the display device using analog RGB signaling.
8. The method of claim 1, wherein the display signals are generated by a computer under test and prior to capturing the display signals, the method further comprising:

providing at least one of the following: a keyboard command and a power change command, to the computer under test from a test computer to generate the display signals.

9. A method for automated testing of display information for a display device comprising:

providing a test command to a computer under test such that the computer under test generates display signals to be transmitted to the display device; capturing the display signals to be received by the display device; converting the display signals into at least one data acquisition signal; and providing the at least one data acquisition signal to the test system.

10. The method of claim 9 wherein prior to the step of providing the test command to the computer, the method includes:

providing an original command to a command converter; and generating the test command.

11. The method of claim 9 further comprising:

taking measurements of the at least one data acquisition signal with a test signal; and generating a display accuracy report.

12. The method of claim 11 wherein the step of taking measurements of the at least one data acquisition signal includes:

measuring at least one of the following: a horizontal synchronization signal, a vertical synchronization signal, a data enable signal, a pixel clock signal, a voltage command signal and a backlight signal.

13. The method of claim 9 wherein the display signal is at least one of the following: a low voltage differential signal, a transition minimized differential signal and an analog RGB signal.

14. An apparatus for automated testing of display signals from video graphics circuitry comprising:

- a printed circuit board capable of receiving display signals;
- a data acquisition signal generated by the printed circuit board from the display signals; and
- a test computer that receives the data acquisition signal from the printed circuit board and tests the display signals.

15. The apparatus of claim 14 further comprising:

- a command generated by the test computer; and
- a command converter coupled to the test computer and the computer under test such that the command converter receives the command from the test computer, generates a test command and provides the test command to the computer under test.

16. The apparatus of claim 15 wherein the command converter generates at least one of the following: a keystroke command and a power change command.

17. The apparatus of claim 14 wherein the printed circuit board includes:

- at least one line buffer; and
- a low voltage differential signaling receiver coupled to the at least one buffer such that low voltage different signaling receiver generates the data acquisition signals that include at least one of the following: a vertical synchronization signal, a horizontal synchronization, a data enable signal and a pixel clock signal.

18. The apparatus of claim 14 wherein the printed circuit board includes:

- a transition minimized differential signaling bus;
- a transition minimized differential signaling receiver coupled to the transition minimized differential signaling bus;

a transition minimized differential signaling transmitter coupled to the transition minimized differential signaling receiver across a signal bus; and a plurality of buffers coupled to the signal bus for receiving at least one of the following signals being provided to the transition minimized differential signaling transmitter: a vertical synchronization signal, a horizontal synchronization, a data enable signal and a pixel clock signal.

19. An apparatus for automated testing of display signals from video graphics circuitry comprising:

- a printed circuit board capable of receiving display signals;
- a data acquisition signal generated by the printed circuit board from the display signal; and
- a test computer operably coupled to the printed circuit board, the test computer including a processor operably coupled to a memory storing executable instructions such that the processor, in response to the executable instructions:
 - generates a command to be provided to a computer under test;
 - receiving the data acquisition signal; and
 - testing the data acquisition signal.

20. The apparatus of claim 19 further comprising:

- a command converter operably coupled to the test computer, such that the command converter receives the command from the test computer and generates a test command to be provided to the computer under test.